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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/575,198

05/23/2000

Paul Lapstun

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9180

24011 7590 02/07/2007  
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BALMAIN, 2041  
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EXAMINER

PHAM, THIERRY,L

ART UNIT

PAPER NUMBER

2625

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/07/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

09/575,198

Applicant(s)

LAPSTUN ET AL.

Examiner

Thierry L. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-5,7-9,11-51 and 53-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7-9,11-51 and 53-69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

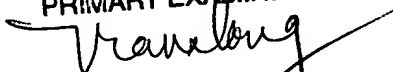
- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

DOUGLAS Q. TRAN  
PRIMARY EXAMINER

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11/24/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

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### DETAILED ACTION

- This action is responsive to the following communication: RCE filed on 1/17/07.
- Claims 1, 3-5, 7-9, 11-51, 53-69 are pending; claims 2, 6, 10, 52, 70-71 have been canceled.
- IDS filed on 11/24/06 has been received and has been considered by the Examiner and herein attached (PTO 1449) with Office Action.

#### *Claim Objections*

Claim 7 is objected to because of the following informalities: Claim 7 cannot depend upon canceled claim 6. Appropriate correction is required.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5, 7-9, 16-21, 53-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori (US 6137590), and in view of Li et al (US 5760382).

Regarding claim 1, Mori discloses a printer (fig. 3) for printing a first interface onto a first surface (fig. 7), thereby to generate a first interface surface (recording medium 10, fig. 7), the first interface including:

- a first coded data (barcode data 10a, fig. 7) identifying plurality of data (e.g. document title, image forming apparatus serial number, password, user's name, and etc, col. 3, lines 32-38); **notes: plurality of barcodes can be printed on a same page (col. 13, lines 12-32)**
- visible information (document data, col. 3, lines 45-50) superimposed (col. 4, lines 35-40) with the first coded data (barcode data 10a, fig. 7, col. 3, lines 45-50), the printer including:

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- a coded data generator (identification code assignment section 7, fig. 6, col. 3, lines 35-40) configured to generate image data for the first coded data using first identity data (e.g. document title, image forming apparatus serial number, password, user's name, and etc, col. 3, lines 32-38) from a computer system, and
- a printing mechanism (printing section 5, fig. 6, col. 1, lines 58-62);
- an ink channel (toner, col. 13, lines 25-31) dedicated for printing the first coded data;
- wherein the printer is configured to print the first interface (first interface includes barcode data 10a, fig. 7) onto the first surface (recording medium 10, fig. 7) by printing the coded data (barcode data 10a, fig. 7) and the superimposed (col. 4, lines 35-40) visible information (image/document data, col. 3, lines 45-50) substantially simultaneously (image data and barcode data at the same time, col. 3, lines 45-50), using the printing mechanism.

Mori teaches an example of an identification barcode 10a (fig. 7) contains plurality of different identity data (e.g. document title, image forming apparatus serial number, password, user's name, and etc, col. 3, lines 32-38), but fails to expressly teach and/or suggest a barcode includes an identity of a region and a plurality of locations on the first surface.

Li, in the same field of endeavor for creating and printing 2-d barcode, teaches a well-known example of a printed barcode (barcode 22, fig. 1) contains an identity of a region and a plurality of locations (e.g. margins settings of a document, page size, fonts, locations of wherein figures and pictures are inserted, col. 3, lines 50-62 and col. 8, lines 1-45, and col. 10, lines 45-52) on the first surface (document 20's surface, fig. 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify an image forming apparatus of Mori to print a barcode identification to include identity of regions and locations as taught by Li because of a following reason: (●) re-generated document do not suffer from the degradation and corruption of image quality (col. 10, lines 5-10 of Li); (●) output quality of regenerated document can be maintained via storing document's settings within barcode (col. 2, lines 40-56 and col. 10, lines 45-52 of Li)

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Therefore, it would have been obvious to combine Mori with Li to obtain the invention as specified in claim 1.

Regarding claim 3, Mori further teaches a printer according to claim 1, wherein the visible information is indicative, to a user, of one or more options, the printer being configured to: (1) receive indicating data indicative (fig. 9) of secondary document data associated with at least one of the options, the indicating data being sensed, by a sensing device (sensing device 30, fig. 9-10), from the first coded data, when one of the options is designed using the sensing device; (2) generate a second coded data (coded data 10a, fig.9) based at least partially on the secondary document data; and (3) a second interface onto a second surface (col. 4, lines 5-40) on the basis of the indicating data.

Regarding claim 4, Mori further teaches a printer according to claim 3, wherein the printer includes an input module configured to: (1) receive, from the sensing device (barcode symbol reader, fig. 7), the indicating data; (2) generate second indicating data (coded data identifying document data, fig. 7) based on the first indicating data, the second indicating data being at least partially indicative of the response data; and (3) send (sending coded data to the computer system, fig.14) the second indicating data to a computer system; (4) the printer (printer 1, fig. 14) being configured to receive the secondary document data from the computer system.

Regarding claim 5, Mori further teaches a printer according to claim 3, wherein the options include any one or more of the following: printer status; printer consumable status; an upper level of a hierarchical help menu; an upper level of a network document directory (col. 3, lines 32-40); and a document function menu.

Regarding claim 7, Mori further teaches at least one reference point is determined on the basis of a coded data layout (col. 4, lines 5-40).

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Regarding to claim 8, Mori further teaches a printer according to claim 7, wherein the printer is configured to received (via communication interface, fig. 15) the coded data layout from the computer system (fig. 15).

Regarding claim 9, Mori further teaches a printer according to claim 8, further including storage means (storage section 4, fig. 6) for storing a plurality of coded data layouts, the printer being configured to: receive (I/F 2, fig. 6), from the computer system, layout selection information indicative of one of the coded data layouts; and use the layout selection information to select one of the stored coded layouts (col. 8, lines 55-60) for use in determining the at least one reference point.

Regarding claim 16, Mori further teaches a printer to claim 1, the printer being configured to print the first interface onto the first surface on demand (col. 3, lines 60-65).

Regarding claim 17, Mori further teaches a printer according to claim 1, where the first interface is printed over a plurality of pages (plurality of pages, col. 4, lines 5-40).

Regarding claim 18, Mori further teaches a printer according to claim 1, wherein the first surface is defined by a substrate (recording medium 10, fig. 7).

Regarding claim 19, Mori further teaches a printer according to claim 18, wherein the substrate is laminar (print media such as paper, col. 3, lines 45-54).

Regarding claim 20, Mori further teaches a printer according to claim 11, wherein the tags are disposed at predetermined positions (position/location of coded data on a recording medium, col. 4, lines 5-45) on the first surface.

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Regarding claim 21, Mori further teaches including a binding mechanism for binding the pages into a bound document (printer equipped with stapler device is well known in the art).

Regarding claims 53-54, Mori also teaches multi-color inks (CMYK is well known for ink printers, fig. 5).

Claims 11-15, 22-51, 55-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori and Li as described in claim 1 above, and further in view of Dymetman et al (US 6330976).

Regarding claim 11, the combinations of Mori and Li do not teach and/or suggest wherein the first coded data includes at least one tag, each tag being indicative of the identity of the region.

Dymetman, in the same field of endeavor for printing coded data, teaches a well-known example of wherein the first coded data includes at least one tag, each tag being indicative of the identity of the region (location identifier, col. 3, lines 55-67).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Mori's coded data to includes at least one tag, each tag being indicative of the identity of the region as taught by Dymetman because of a following reason: (●) adding a location identifier coded data to identify the position of the sensing device relative to the copy helps user to easily locate the location of the tags.

Therefore, it would have been obvious to combine Mori and Li with Dymetman to obtain the invention as specified in claim 11.

Regarding claim 12, Dymetman further teaches a printer according to claim 11, wherein the first coded data includes a plurality of the tags (fig. 3), the coded data generator being configured to ascertain a position (col. 3, lines 55-67) of each tag prior to printing, the respective being determined on the basis of a coded data layout.

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Regarding claims 13-14, Mori further teaches a printer according to claim 12, wherein the coded data generator is configured to receive the coded data layout from the computer (from external device, fig. 15) device prior to printing the first coded data.

Regarding claim 15, Dymetman further teaches a printer, wherein each of the tags includes: first identity data defining a relative position (col. 3, lines 55-67) of that tag; and second identity data identifying the region (identifies a location of a zone within a page, col. 3, lines 55-67).

Regarding claims 22 & 26, Dymetman further teaches a printer, wherein the tags are disposed on the first surface within a tessellated pattern (fig. 3) comprising a plurality of tiles, each of the tiles containing a plurality of tags (col. 7, lines 42-52).

Regarding claim 23, Dymetman further teaches a printer, wherein the tiles interlock with each other (fig. 3, col. 12, lines 25-67) to substantially cover the first surface.

Regarding claims 24-25, Dymetman further teaches a printer, wherein the tiles are all of a similar shape (squares, fig. 3).

Regarding claim 27, Dymetman further teaches a printer according to claim 11, wherein each of the tags includes at least one common feature (col. 12, lines 60-67) in addition to the second identity data.

Regarding claim 28, Mori further teaches a printer according to claim 27, wherein at least one common feature is configured to assist finding and/or recognition of the tags by associated by tag reading apparatus (barcode reader, fig. 7).



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Regarding claim 29, Mori further teaches a printer according to claim 27, wherein the at least one common feature is represented in a format incorporating redundancy of information (col. 4, lines 40-60).

Regarding claim 30, Dymetman further teaches a printer, wherein the at least one common feature is rotationally symmetric (fig. 3, col. 12, lines 30-56) so as to be rotationally invariant.

Regarding claim 31, Dymetman further teaches a printer, wherein the at least one common feature is ring-shaped (fig. 10).

Regarding claims 32-35, Dymetman further teaches a printer, wherein each of the tags includes at least one orientation feature (orientation marker 206, fig. 3, col. 12, lines 30-67) for enabling a rotational orientation of the tag to be ascertained by associated tag reading apparatus (detection device, col. 8, lines 40-65).

Regarding claim 36, Dymetman further teaches a printer, wherein each of the tags includes at least one perspective feature for enabling a perspective distortion (col. 5, lines 39-46 and col. 7, lines 42-62) of the tag to be ascertained by associated tag reading apparatus.

Regarding claim 37, Dymetman further teaches a printer, wherein at least one perspective feature includes at least four-features (orientation, page location, position, and size, col. 12, lines 30-67) which are not coincident.

Regarding claim 38, Dymetman further teaches a printer, wherein each tag includes plurality tag elements (orientation, location of zones, fig. 3, col. 12, lines 30-67), the first and second identity data each being defined by a plurality of the elements.

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Regarding claim 39, Dymetman further teaches a printer, wherein the tag elements are disposed in one or more arcuate bands around a central region of each tag (fig. 6b).

Regarding claim 40, Dymetman further teaches a printer, wherein there are a plurality of the arcuate bands disposed concentrically (fig. 6b) with respect to each other.

Regarding claim 41, Dymetman further teaches a printer, wherein each element takes the form of a dot (fig. 5a) having a plurality of possible values.

Regarding claim 42, Dymetman further teaches a printer, wherein the number of possible values is two (ones and zeroes, fig. 5a).

Regarding claims 43-44, Dymetman further teaches a printer, wherein when representing one of the possible values, the tag elements absorb, reflect or fluoresce electromagnetic radiation of a predetermined wavelength or range of wavelengths (UV ink, cols. 11-12) to a predetermined greater or lesser extent than the first surface.

Regarding claims 45-46, Dymetman further teaches a printer, wherein the tags are slightly visible (visible or invisible, col. 12, lines 65-67) to an average unaided human eye under daylight or ambient lighting conditions.

Regarding claims 47-48, Dymetman further teaches a printer, wherein the first identity data is represented in a format incorporating redundancy of information (orientation of the page, col. 12, lines 30-67).

Regarding claims 49-50, Dymetman further teaches a printer, wherein the printer is an ink printer (UV ink, col. 12, lines 18-25).

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Regarding claim 51, Dymetman further teaches a printer includes a separate ink channel for printing the tags (UV inks for printing tags, col. 12, lines 1-67).

Regarding claim 55, Dymetman further teaches a printer, wherein at least a plurality of the tags are disposed stochastically upon the first surface (figs. 3-10).

Regarding claim 56, Dymetman further teaches a printer, wherein the tags disposed in regular array on the first surface, in accordance with the coded layout data (col. 12, lines 60-67).

Regarding claims 57-58, Dymetman further teaches a printer, wherein the array is rectangular (fig. 6a) and triangular (fig. 5b).

Regarding claim 59, Dymetman further teaches a printer, wherein the tags are tiled over the first surface (col. 7, lines 42-52).

Claims 60-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori and Li as described in claim 1 above, and further in view of Kovacs et al (U.S. 5932630).

Regarding claims 61, combinations of Mori and Li do not explicitly disclose wherein the printing mechanism includes an inkjet printhead for printing ink onto the first surface.

Kovacs, in the same field of endeavor for printing, teaches the printing mechanism includes an inkjet printhead (ink jet printing system, col. 2, lines 6-10) for printing ink onto the first surface.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Mori and Li as per teachings of Kovacs because of a following reason: (ink jet printing system provide simpler, lower cost device and high speed printing capability, Kovacs, col. 2, lines 50-55).

Therefore, it would have been obvious to combine Mori and Li with Kovacs to obtain the invention as specified in claim 61.

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Regarding claim 62, Kovacs further teaches a printer, wherein the printhead is a drop on demand inkjet printhead (col. 2, lines 6-10).

Regarding claim 63, Kovacs further teaches a printer, wherein the printhead is a pagewidth printhead (col. 14, lines 6-10).

Regarding claim 64, Kovacs further teaches a printer, wherein the printhead is configured to deliver a plurality of inks colors (CMYK inks, col. 1, lines 15-20) onto the first surface with one printing pass.

Regarding claim 65, Kovacs further teaches a printer, wherein the printhead includes electro-thermal bend actuators (thermal ink jet head, col. 2, lines 38-55) to eject the ink onto the first surface.

Regarding claim 67, Kovacs further teaches a printer including a forced filtered (airtight enclosure, col. 4, lines 13-26) air delivery mechanism for keeping nozzles of the printhead relatively free of paper dust.

Regarding claim 68, Kovacs further teaches a printer, wherein the printer includes moving nozzles chamber (col. 2, lines 6-67).

Regarding claims 60, 66 & 69, a printer including a dual printing mechanisms for printing opposite faces of the page simultaneously (both sides simultaneous printing is well known in the art).

### ***Response to Arguments***

Applicant's arguments, see pages 12-13, filed 1/178/07, with respect to the rejection(s) of claim(s) 1 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of

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rejection is made in view of newly found prior art reference due to newly amended features/limitations as cited in claim 1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L. Pham whose telephone number is (571) 272-7439. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thierry L. Pham

DOUGLAS Q. TRAN  
PRIMARY EXAMINER

